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ABSTRACT

Experiences of students while attending the City University of New York (CUNY) and their status approximately one year after graduation were studied with a sample of June 1979 graduates. About a 60 percent response rate to the questionnaire, which is appended, was obtained. It was found that 47 percent of associate degree graduates and 31 percent of baccalaureate degree graduates were minority group students, and these proportions closely approximate the enrollment of minorities in CUNY; women are in the majority among the graduates, constituting 64 percent of associate degree recipients and 55 percent of bachelor degree recipients; and a substantial proportion of the graduates (38 percent) are over 25 years old. Significant numbers of the graduates entered the university with poor academic preparation, and the university serves as an important channel of upward mobility for many of its students. Almost two-thirds of the graduates came from homes where neither parent had attended college; one-fifth of the graduates were from homes where the highest level of education was elementary school. Additional characteristics of the students include: 70 percent or more required financial aid for college; almost one-fifth of bachelor graduates and one-fourth of associate graduates worked full-time while attending college; more than three-quarters of the students were married while attending the university; many students attended college part-time; 46 percent of associate graduates and 33 percent of bachelor graduates enrolled in degree programs within a year after graduation; nearly three-quarters of the graduates were employed full-time at the time of the survey; and only five percent were neither working nor enrolled in school. A questionnaire is appended. (SW)

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THE CITY UNIVERSITY OF NEW YORK

OUTCOMES OF EDUCATIONAL OPPORTUNITY:
A Study of Graduates from The City University

by

Barry Kaufman, James Murtha, and Jerzy Warman

U.S. DEPARTMENT OF EDUCATION
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SUMMARY OF FINDINGS

The following are the highlights of an extensive study of students who graduated from colleges of The City University of New York in June 1979. The study reports on their experiences while attending the University and their status approximately one year after graduation.

CITY UNIVERSITY IS A MAJOR PROVIDER OF EDUCATIONAL OPPORTUNITY FOR DIVERSE GROUPS OF NEW YORK CITY RESIDENTS.

- In the 1978-79 academic year CUNY college graduates accounted for 53% of baccalaureate degrees, and 75% of associate degrees granted by all higher education institutions in New York City.

- The proportion of minority students that graduate from the University's senior and community colleges is nearly three times the proportion that graduate from postsecondary institutions nationally.

- Forty-seven percent of Associate degree graduates and 31% of Baccalaureate degree graduates were minority group students. These proportions closely approximate the enrollment of minorities in the University.

- Women are in the majority among the graduates, constituting 64% of Associate degree recipients and 55% of Baccalaureate degree recipient graduates.

- A substantial proportion of the graduates (38%) are over 25 years of age.

SIGNIFICANT NUMBERS OF THE GRADUATES ENTERED THE UNIVERSITY WITH POOR ACADEMIC PREPARATION.

- Thirty-six percent of the Bachelors graduates entered with high school averages below 80 percent; 52% of the Associate graduates entered with high school averages below 75 percent.

- Fifty-one percent of the Bachelors graduates and 68% of the Associate degree graduates required one or more remedial courses while they attended the University.

THE UNIVERSITY SERVES AS AN IMPORTANT CHANNEL OF UPWARD MOBILITY FOR MANY OF ITS STUDENTS.

- Almost two-thirds of the graduates came from homes where neither parent had attended college.

- Almost one-fifth of the graduates were from homes where the highest level of education was elementary school.

- Seventy percent or more of the graduates required financial aid while enrolled in the University.

- Sixty percent of the graduates feel that their chances for occupational success are very much better than those of their parents.

SUBSTANTIAL SUBGROUPS OF THE CUNY STUDENT BODY ARE SUBJECTED TO COMPETING TIME AND ENERGY DEMANDS IMPOSED BY FAMILY AND EMPLOYMENT OBLIGATIONS.

- More than one-quarter of the graduates are married, and more than three-quarters of these students were married while attending the University.

- Almost one-fifth of Bachelors graduates and one-fourth of Associate graduates worked full-time while attending the University.

SIGNIFICANT NUMBERS OF THE GRADUATES EXHIBIT A NONTRADITIONAL ATTENDANCE PATTERN.

- Nineteen percent of Associate and 44% of Baccalaureate graduates completed their studies in the traditional "on time" period (8 semesters for 4-year programs, and 4 semesters for 2-year programs).

- Part-time attendance is the major influence on the length of time required to graduate; students attend part-time largely because of employment demands, not for academic reasons.

THE OVERWHELMING MAJORITY OF GRADUATES EXPRESS SATISFACTION WITH THEIR DECISION TO ATTEND COLLEGE, AND CUNY IN PARTICULAR.

- Ninety percent of the graduates if given the chance to do things over again would enroll in college.

- Eighty-three percent of the graduates would enroll at CUNY again.

MANY CUNY STUDENTS CONTINUE THEIR EDUCATION AFTER GRADUATION.

- Forty-six percent of Associate graduates and 33% of Bachelor's graduates enrolled in degree programs within a year since their graduation. Many of these students continued in degree programs at The City University.

- Over 80% of the graduates expect to continue their education and receive an additional degree.

THE MAJORITY OF GRADUATES ARE EMPLOYED: MANY HELD FULL-TIME JOBS WHILE ATTENDING CUNY.

- Nearly three-quarters of the graduates were employed full time at the time of the survey.

- Among those not employed, more than three-quarters were continuing their education in a degree program.

- Only 5% of the graduates can be described as unemployed, neither working nor enrolled in school, though many of these were presumably still caught up in the transition from school to work.

- Among those employed full time, the average annual income is in excess of $14,000. There was no significant difference between the salaries of those with Associate degrees and those with Baccalaureate degrees.

- Almost 40% of the graduates who were employed full time held their jobs prior to graduation.

- Graduates who held their jobs prior to graduation earned an average $4,000 more than those who did not.

- Approximately one-half of the graduates had secured jobs directly related to their major program at CUNY.

ACKNOWLEDGEMENTS

This study would not have been completed without the interest, efforts and assistance of a number of individuals. The study owes its origins to Chancellor Robert J. Kibbee, who recognized a need for University-wide information on a cohort of recent CUNY graduates. Until the time that he left the University, former Deputy Chancellor Egon Brenner was especially supportive, providing the resources necessary to conduct the study, making valuable suggestions about the direction of the research and sharing with us his perceptive insights on the nature of the University and its students. Acting Deputy Chancellor Leon M. Goldstein provided continued support for the research and his advice in the later stages of the study greatly facilitated its completion. Discussions of preliminary findings with the Chancellor and members of the Cabinet resulted in many useful ideas, which we have tried to incorporate in this final report.

Several individuals performed the very essential administrative and supportive tasks which are associated with every research project. In particular, Shelley Reed provided invaluable assistance by effectively supervising a myriad of daily procedural details and research tasks; Shira Kramer-Danziger wrote several of the computer programs; and Kathleen Kramer, Linda Martin, Beverly Tempkins, and Martin Rosenblum, all of whom are graduate students at CUNY assisted in the coding, data entry and mail operations.

Garson Wolitzky, Steve Blumenthal and other Reprographics staff were responsible for the mechanical production of both the questionnaire and the charts contained herein. Their responses to our requests were first-rate and professional, as always. Sarah Haber typed the tables contained in the report; the staff of the Central Office Word Processing Unit typed the drafts and revisions of the manuscript.

Our collection of student transcripts for the academic history phase of the study was greatly facilitated by officials at each of the CUNY campuses, especially the registrars.

Finally, we wish to express our gratitude to the alumni who completed and returned the mail questionnaire.

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I. INTRODUCTION

This report presents the findings from a study of the June 1979 graduates from the colleges of The City University of New York. The major objective of the project was to provide the Office of the Chancellor with information on CUNY graduates with respect to their social backgrounds, academic histories while attending the University, and their experiences in the year following graduation.

While a number of CUNY colleges, most notably the community colleges, have surveyed their graduates from time-to-time, the current study represents the first University-wide effort. As such it is expected to provide an important baseline for comparative analyses of the experiences of future graduating classes. Knowledge gained from this and subsequent studies of graduates, who by definition are our most successful students, should provide much needed information for program evaluation and planning.

In June 1979, CUNY colleges awarded almost 11,000 Associate and Baccalaureate degrees. Since it was neither feasible nor practical to study all of these students, we developed a research design that called for a random sample of graduates from each college. A description of the research methodology is provided in Appendix A.

The study was conducted in two stages. First, the college transcripts of graduates in the sample were collected, coded and

analyzed. The transcripts provided data on academic history at CUNY, as well as information on certain pre-college admission characteristics. Next, a survey questionnaire was mailed to these graduates. (Appendix B contains a copy of the questionnaire.) The questionnaire was designed to provide basic demographic data and information about occupational and educational standing since leaving CUNY. We achieved an approximately 60 percent effective response rate to the survey. (Appendix A also includes information on response rates and possible sources of sampling bias.)

In order to facilitate the presentation of the data, the report is organized into a series of profiles of the graduates, as follows: demographic characteristics; academic history at the University; labor market experiences since graduation; and subsequent education. Since the study is concerned with recipients of both the Associate and Baccalaureate degrees, we examine differences between these two groups throughout the report. For convenience, the Associate and Baccalaureate graduates are sometimes referred to as AAs and BAs, respectively.

II. DEMOGRAPHIC CHARACTERISTICS

Data on the social and personal characteristics of the graduates indicate that the changes in the composition of the CUNY student population which occurred in the past decade are reflected among the graduates. Moreover, the data suggest that the typical CUNY graduate, and by reasonable inference the typical CUNY undergraduate, differs dramatically from the stereotypical college student. Such stereotypes, largely based on students at residential private or prestigious state universities, simply do not apply at CUNY. Descriptions of the graduates' social backgrounds make this apparent.

Minorities in the Graduating Class

Throughout its history The City University has been a primary path of access to higher education for New York City's urban poor. Since the 1847 establishment of the Free Academy (later City College), CUNY offered free college education to successive groups of Jewish, Irish, and Italian immigrants. Beginning in 1970 the Open Admissions Program significantly extended this access to the Black and Hispanic minorities, which had until then been largely excluded from the University by its highly selective admission standards (see Lavin, Alba and Silberstein, 1981: chapter 1 for the most thorough review of minority participation at CUNY). The Open Admissions Program (OAP), coupled with the Search for Education, Elevation and Knowledge (SEEK) and College Discovery (CD) programs established earlier, significantly altered ethnic enrollment patterns at the

University. For example, the proportions of Black and Hispanic students among entering freshmen increased from a total of 20% in 1969 to 52% in 1978 (see CUNY Data Book, 1978-79).

Figures II.1 (BAs) and II.2 (AAs) provide comparisons of minority enrollment and graduation distributions both at CUNY and nationwide. CUNY enrollment data are presented for the modal entry year of the June 1979 graduates: Fall 1975 for BAs, and Fall 1977 for AAs. National data are presented for Fall 1976 enrollments and 1976-77 earned degrees (though not strictly comparable to the CUNY data, these were the most recent data available from the Office of Civil Rights).

For both the enrollment and graduation data Black and Hispanic proportions at CUNY are between two and one half to three times higher than the national figures. Moreover our review of the CUNY and national data indicates that minority students have increased their enrollment at CUNY during the last ten years at a much more rapid pace than is the case nationally. These findings suggest that the open access policies in effect at the University have benefited substantial numbers of minority students. It should be noted, however, that the data also show that graduation rates lag somewhat behind enrollment for minority students; though we cannot closely analyze the effects of minority status on graduation with our data set, the disparities between enrollment and graduation reported here are consistent with findings on entry cohorts that are reported by Lavin, Alba, and Silberstein (1981).

Women in the Graduating Class

As would be expected from enrollment data, women outnumber men among the graduates, constituting 59% of those in our sample (see Table II.1). The predominance of women is most pronounced among AAs, among whom nearly two-thirds are women. By contrast, though still a majority, women comprise 53% of the BAs. A comparison of the graduate sex distributions with enrollment data (see Table II.1) shows a reasonably close correspondence for the BA group; among Associate degree recipients, women are more heavily represented than would be expected from enrollments, suggesting that they are somewhat more likely than men to complete these degree programs.

Age of the Graduates

Similarly, the two groups of graduates have different age distributions (Table II.2). AAs are slightly older on average (by 1.1 years). More than one-quarter (27%) of them were 31 years of age or older compared to less than one-fifth (19%) of BAs. However, almost two-thirds (65%) of the latter group were 25 years of age or younger compared to 56% of the AAs. These differences in the age distributions should not, however, obscure a major finding with respect to age: 13% of all the graduates are over 35 years of age, and nearly 40% are over 25. The data show that the University provides educational oppor-

tunities to students from different age groups, and these opportunities are not limited to the typical recent high school graduate. Furthermore, these findings suggest that many students are combining their education with family and career. We examine this point below.

Marital, Family, and Employment Status

Marital characteristics of the graduating class are quite instructive, especially in conjunction with the data on sex and age. Twenty-eight percent reported being married at the time of the survey. Of this group, 79% were married prior to completion of the degree (Table II.3), indicating that approximately 20% of all the graduates were married while they were students at CUNY. Also, 60% of the married graduates reported having one or more dependent children (Table II.4) and 21% of all graduates reported working full-time (with another 53% employed part-time) while they were enrolled for undergraduate study (Table II.5). These findings, together with those presented above, further illustrate the degree to which the average CUNY student differs from the stereotypical undergraduate who is often depicted as young and single, and employed, if at all, on a part-time basis.

These attributes provide a dramatic demonstration of the unique character of the CUNY graduate. For example, 18% of all the graduates had children and worked (either full-time or part-time) while they were undergraduates. Over half of this grou

worked full time. Of significance here is that nearly one-fifth of the students who graduate from the University do so in the face of the competing demands of both family and work life, raising the possibility that these responsibilities may, in fact, delay students' progress toward the degree. We shall return to this issue later in the report.

Family Backgrounds of the Graduates

A question about the level of parental education was included in the questionnaire (see Appendix B, item 31) as an indicator of the social origins of the graduates. Survey research conducted on national population samples (Blau and Duncan, 1967; Featherman and Hauser, 1975) has shown that parents' educational experiences powerfully influence children's ultimate social standing. Moreover, the literature strongly suggests (see Bowles and Gintis, 1976) that parents' education, as part of their broader social status, is a key element in preserving social inequality from one generation to the next.

The data on parents' educational attainments shown in Figure II.3 and Table II.6, indicate a significant degree of educational mobility among the graduates. Over 60% of both groups of graduates come from homes where neither parent has attended college at all (see Figure II.3); in fact, over one-third of parents had

not completed high school. Moreover, the similarities in the distributions of parental education between BAs and AAs indicate that the opportunity to earn even a 4-year degree at CUNY is not powerfully limited by family origins, though the parents of BAs, as would be expected, have a higher average level of education.

While the data on parents' educational backgrounds among CUNY graduates cannot directly address the more general issue of social inequality raised above, nonetheless, they do suggest that CUNY provides an extraordinary opportunity for educational mobility to its students. This pattern most probably distinguishes CUNY from other universities, whether independent or publicly supported, where access is much more restricted.

An examination of the annual statistics on degrees awarded (SED, 1980) by colleges and universities in New York City reveals the breadth of these mobility opportunities at CUNY. For example, in the 1978-79 academic year 53% of Baccalaureate and an overwhelming 75% of Associate degrees granted in the City were from CUNY. These figures on CUNY's relative share of the local degree pool indicate that CUNY is a relatively large contributor to the overall rate of educational mobility in the New York City area.

The degree to which educational mobility influences students' perceptions of the future is illustrated by the following: When asked to compare their chances for occupational success to those of their parents (see Appendix B, Item 38), 60% of the

graduates felt that their chances were "very much better" than those of their parents and 29% responded "somewhat better" (see Table II.7). While responses to this item may simply reflect the optimism (perhaps unwarranted) of recent graduates, these perceptions of prospects for upward social mobility imply that CUNY provides the majority of its graduates--by their own estimation--with good opportunities for advancement. Note that these perceptions of future social standing are not the simple product of youthful naivete: recall the high proportions of graduates who are married, have children and have been working full time while attending college. Their answers surely reflect the actual state of affairs, rather than future chances.

These views also appear to be realistic in light of data on family income (Table II.8). Among those who were living with their parents prior to graduation (see column "dependent"), approximately 60% were from homes where the annual gross family income was less than $20,000 (for the wording of the survey items that elicited this information, see Appendix B , items 19 and 20). Consequently, the somewhat modest economic origins of the CUNY graduates may serve to make their own income prospects appear rather promising.

Table II.8 also contains two other noteworthy findings. First, among those in a "dependent status", BA graduates come from families with somewhat higher incomes (i.e., $20,000 and above).

This difference in family income, more dramatic than the findings on parental education, suggests the greater tendency of middle-class families to send their children to CUNY's 4-year, rather than 2-year colleges. Second, the overall percentage of graduates who report being on their own while students is 38%, in our view a surprisingly high figure. Financial aid data would lead us to suspect a distribution such as this for the total undergraduate student body. However, the fact that independent students, who would presumably encounter more financial and family constraints than dependent students, comprise over one-third of the graduates is encouraging, indicating a great deal of success in coping with financial pressures.

Our analysis of the graduates' personal attributes, suggests that many overcame social and economic conditions which are often identified as presenting obstacles to the successful pursuit of a college degree. As we will see in the next section, many graduates also faced severe academic problems on the path to their degrees.

FIGURE II.1

Ethnic Distributions of Bachelor Enrollees and Graduates: A Comparison of CUNY and National Data

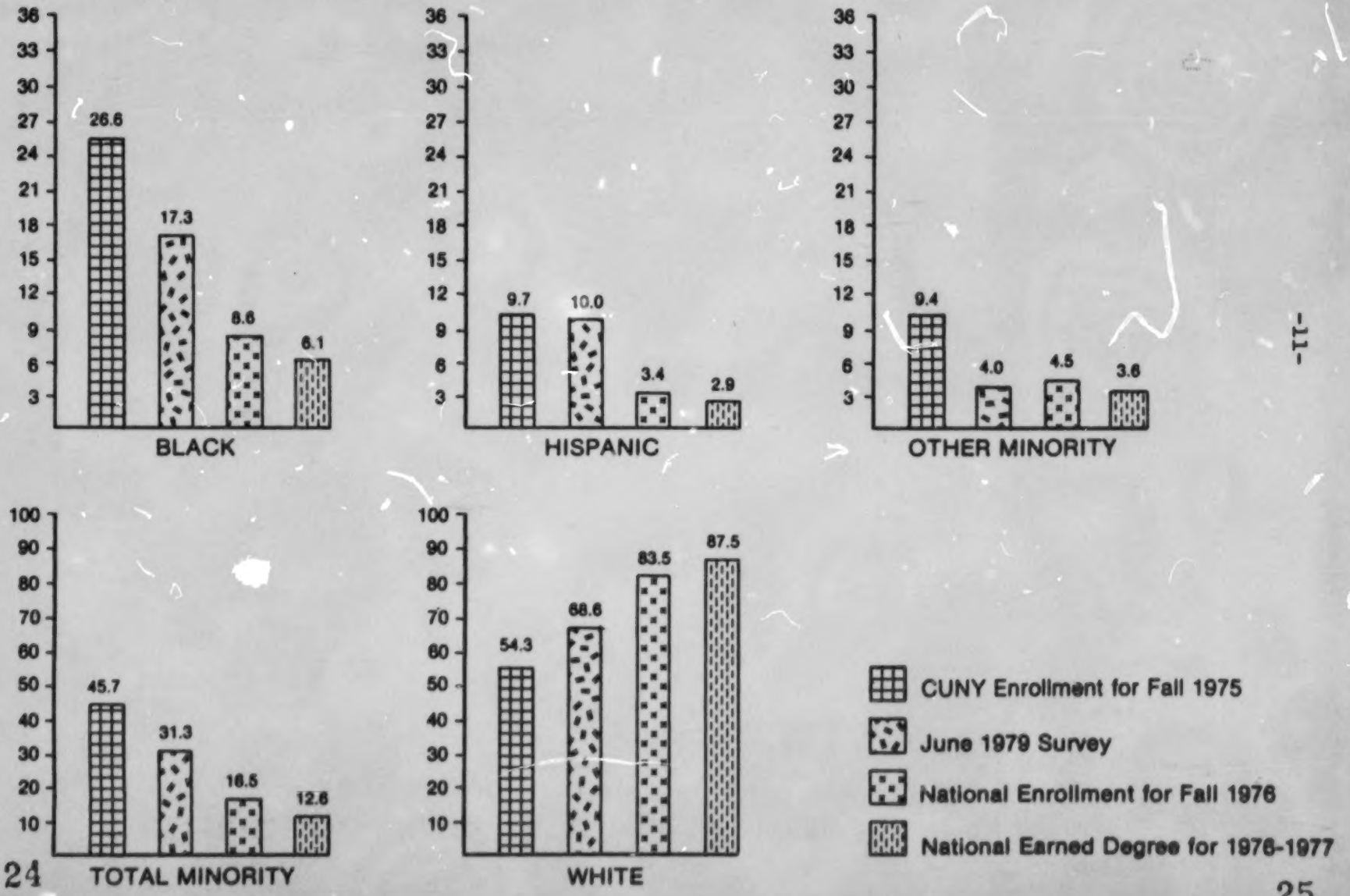


FIGURE II.2

Ethnic Distributions of Associate Enrollees and Graduates: A Comparison of CUNY and National Data

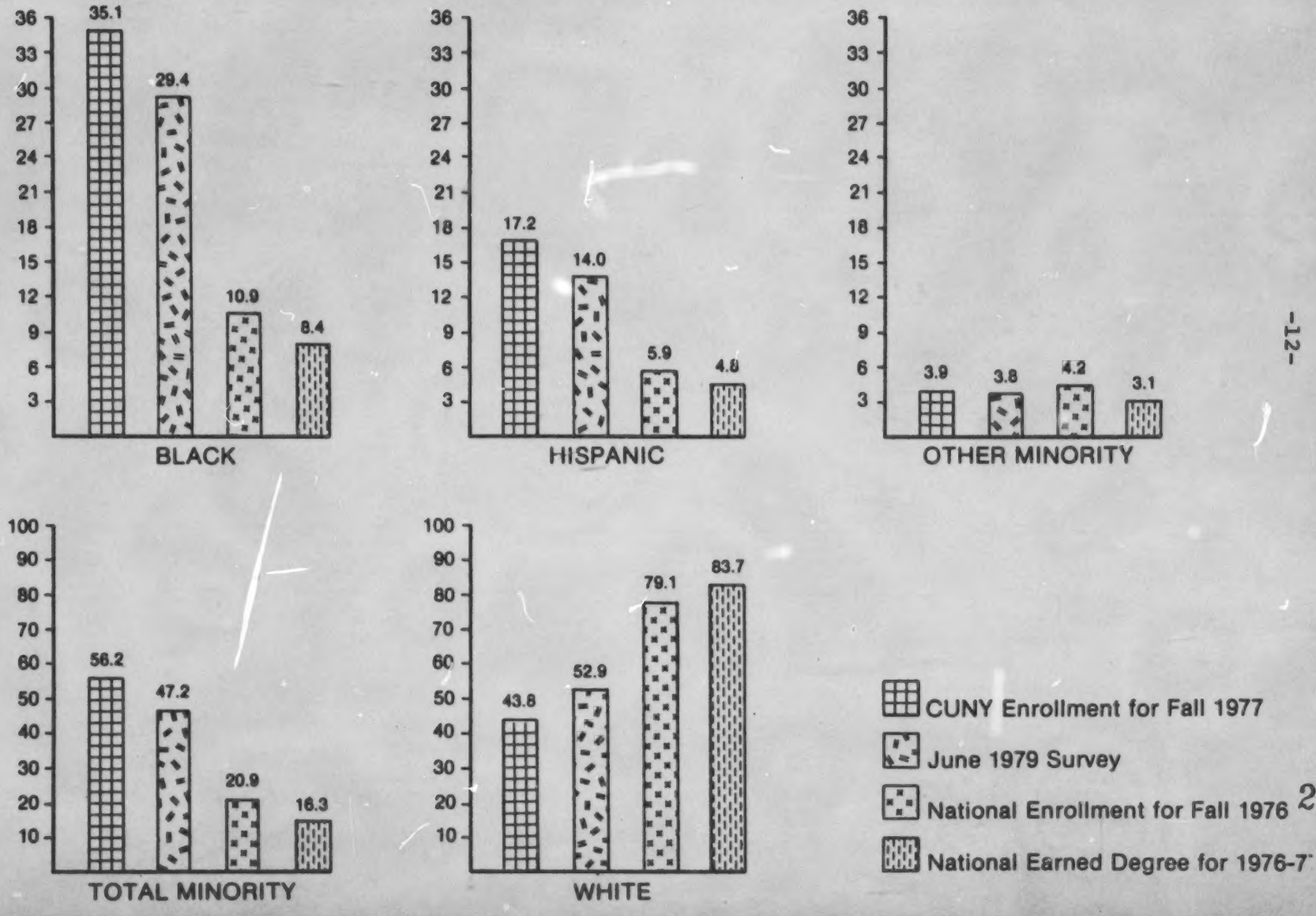
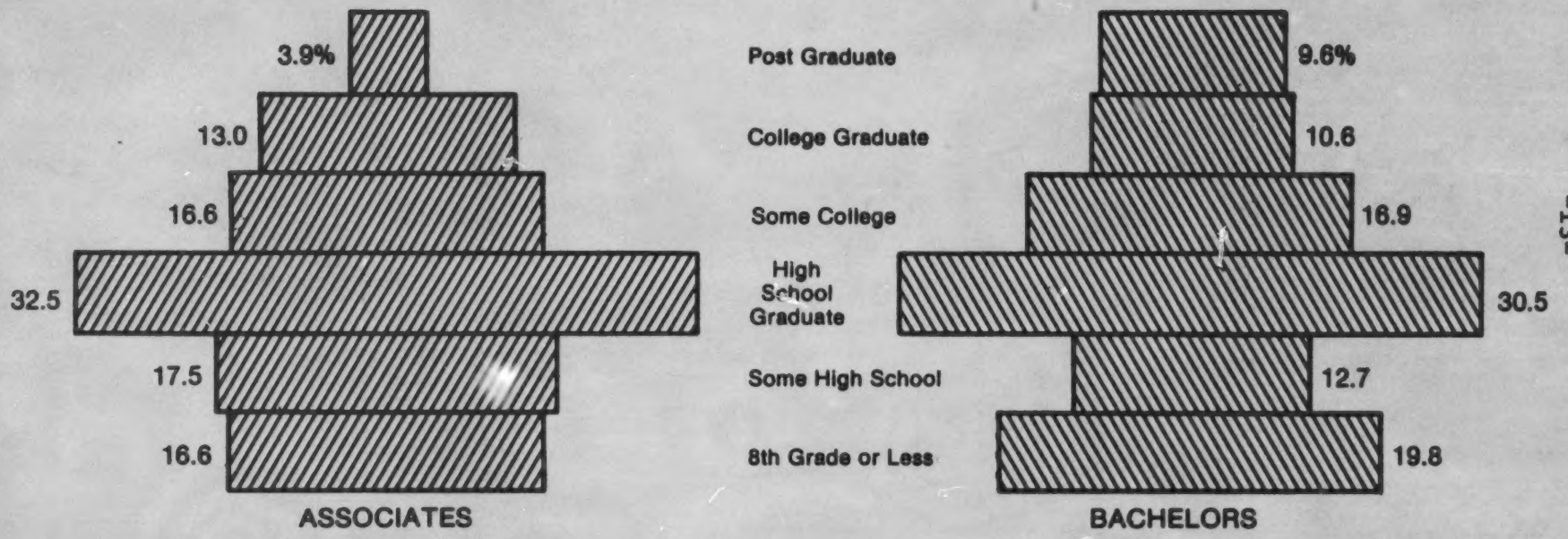


FIGURE II.3

Parents' Education* of June 1979 Graduates, Associates and Bachelors



* Parents' education was established by taking the highest level of education reached by either parent.

Table II.1: SEX DISTRIBUTIONS OF ENROLLEES* AND GRADUATES BY DEGREE

	Associates		Bachelors	
Sex	Fall 1977 Enrollment	June 1979 Graduates	Fall 1975 Enrollment	June 1979 Graduates
Females	53.6	64.0	51.8	55.3
Males	46.4	36.0	48.2	44.7
Total %	100.0	100.0	100.0	100.0
(N)	(73,960)	(554)	(138,408)	(913)

*Enrollment data are from CUNY DATA BOOK and represent modal entry years of Fall 1977 for Associate graduates and Fall 1975 for Bachelors graduates.

Table II.2: AGE DISTRIBUTIONS BY DEGREE

Age	Associates	Bachelors	Total
21 & Under	27.0	7.0	14.5
22 - 25	28.5	58.1	47.0
26 - 30	17.6	15.7	16.4
31 - 35	9.8	8.4	8.9
36 & Over	17.1	10.7	13.1
Total %	100.0	100.0	100.0
(N)	(295)	(493)	(788)
Mean Age in Years	28.0	26.9	27.3

Table II.3: MARITAL STATUS BY DEGREE

Marital Status	Associates	Bachelors	Total
Married	28.0	27.4	27.6
before graduation	83.0	76.7	79.3
after graduation	17.0	23.3	20.7
Single	72.0	72.6	72.3
Total %	100.0	100.0	100.0
(N)	(297)	(496)	(793)

Table II.4: DEPENDENT CHILDREN WHILE AT CUNY, BY DEGREE (MARRIED GRADUATES ONLY)

Number of Children	Associates	Bachelors	Total
None	27.2	47.4	39.7
1 or more	72.8	52.6	60.3
Total %	100.0	100.0	100.0
(N)	(83)	(135)	(218)

Table II.5: EMPLOYMENT STATUS WHILE ENROLLED* AT CUNY, BY DEGREE

Employment Status	Associates	Bachelors	Total
Not Employed	33.7	20.7	25.6
Employed Part-time	40.7	60.6	53.1
Employed Full-time	25.6	18.8	21.4
Total %	100.0	100.0	100.0
(N)	(303)	(502)	(805)

*The questionnaire did not specify time frame precisely. Therefore the responses about employment may be not co-terminous with the attendance at CUNY, but can still be inferred to reflect the status existing for most of that time.

Table II.6: PARENTS' EDUCATION BY DEGREE OF GRADUATES

Parents' Education	Associate Graduates		Bachelor Graduates	
	Father	Mother	Father	Mother
Post Graduate	3.7	.7	6.1	6.4
College Graduate	8.5	8.0	9.9	5.1
Some College	10.4	9.8	10.9	11.7
High School Graduate	31.1	37.6	28.4	37.5
Some High School	22.2	18.1	16.4	15.7
8th Grade or Less	24.4	25.8	28.2	23.7
Total %	100.0	100.0	100.0	100.0
(N)	(270)	(287)	(475)	(485)

Table II.7: PERCEPTIONS OF OCCUPATIONAL SUCCESS BY DEGREE

Chances for Occupational Success Compared with Parents	Associates	Bachelors	Total
Very Much Better	57.8	61.6	60.2
Somewhat Better	33.6	26.6	29.2
Same	4.7	7.0	6.1
Somewhat Worse	2.6	3.3	3.0
Very Much Worse	1.2	1.5	1.4
Total %	100.0	100.0	100.0
(N)	(297)	(493)	(790)

Table II.8: FAMILY INCOME BY DEGREE TYPE AND DEPENDENT/INDEPENDENT STATUS

	Associates		Bachelors		Total	
Family Income	Dependent	Independent	Dependent	Independent	Dependent	Independent
Under $4,000	4.3	15.4	1.1	16.5	2.2	16.0
4,000 - 7,999	9.6	19.6	10.6	12.8	10.3	15.9
8,000 - 11,999	18.5	17.1	12.4	14.8	14.4	15.8
12,000 - 15,999	23.9	15.1	17.7	14.9	19.7	15.0
16,000 - 19,999	12.7	8.9	14.6	17.1	14.0	13.4
20,000 - 23,999	16.2	12.8	20.4	8.2	19.0	10.3
24,000 & Over	14.8	11.1	23.2	15.6	20.5	13.6
Total %	100.0	100.0	100.0	100.0	100.0	100.0
(N)	(313)	(154)	(150)	(125)	(464)	(279)
Percent Independent	33.3%		45.3%		37.6%	

III. ACADEMIC CHARACTERISTICS

An issue that has both policy and public relations implications for the University is the length of time students require in order to complete the undergraduate degree. This section is concerned with developing a better understanding of this issue by examining the academic histories of the graduates, prior to and during their enrollment at CUNY. Specifically, we analyze the effect of academic characteristics, along with social and personal factors, on progress toward the degree.

Academic Backgrounds of the Graduates

An essential dimension of a students academic history, especially influencing the decision to admit and, in the case of CUNY, at what level, is high school average. Historically, admission to either senior or community colleges has been based upon the numerical average of high school grades in academic courses. Within the University this measure is referred to as the College Admission Average or CAA. Traditionally, CAA has also been used as an estimate of educational disadvantage or under-preparedness for college course work: those entering the senior colleges with averages below 80% and the community colleges with scores below 75% are presumed to begin their college careers with academic deficiencies.

An analysis of CAAs among the graduates shows (see Figure III.1) that 36% of BAs and 52% of AAs began with averages below these benchmarks. Thus, for a substantial minority of the BAs and a majority of the AAs in our sample, graduation occurred only after overcoming initial academic problems. The accomplishments of these graduates are underscored when we examine the advantage that a high CAA confers (see Figure III.1). Students who entered with CAAs above 80% constitute 64% of BA graduates compared to 47% of the modal BA entry cohort (Fall 1975). Similarly, among AA graduates 29% began with CAAs above 80% compared to 14% in the modal entry cohort (Fall 1977). Precisely how CAA influences success among CUNY students requires analyses of entering cohort, not graduate cohort data; however, the current study indicates that while CAA is a rather potent predictor of academic success, many are able to overcome the initial disadvantages implied by a low high school average.

The Paths to Graduation

Empirical studies of entry cohorts from earlier years (cf. Max, 1968; Kaufman and Loveland, 1976; Lavin, Alba, and Silberstein, 1981) along with anecdotal information, argue that for many CUNY students the path to graduation extends beyond the expected on-time periods. In the transcript phase of our study we were particularly interested in unravelling this issue of "time to graduation", both by precisely measuring attendance patterns and by uncovering the factors that

influence the length of the undergraduate career. (Some of these possible factors, such as family and employment responsibilities were discussed in the previous section). There are several possible methods of measuring how long a student takes to graduate. If, for example, we look at the average number of years from the first enrollment to graduation, we find that the median number of academic years it takes to complete the Baccalaureate degree is 4.23, while for the Associate degree the corresponding number is 3.00 years. These figures indicate clearly that more than half of the graduates studied did not finish "on time" (i.e. receive a Bachelors degree in 4 or an Associates degree in 2 years). In a sense, though, these findings are misleading because we have not examined the attendance patterns that underlie them.

To begin with, some of the graduates take leaves of absence, "stopping out" from their studies for one or more semesters. As we see in Table III.1, 17% of the graduates had one or more such breaks in their attendance. Simply counting academic years from first enrollment mixes those who "stop-out" with those who attended continously making the measure of total years nearly useless. Though over 80% of the graduates did not "stop-out" (an important finding in itself), the remainder inflate the overall time measures. We are left with the obvious: if students interrupt their attendance, they will take a longer time to finish the degree.

A better way to examine the "time to complete" issue is to focus on the number of semesters that a student actually attends. These figures are reported in Table III.2. As the data indicate, only 19% of AAs, compared to 44% of BAs finish "on time." Furthermore, significant proportions of both groups (46% of AAs, 20% of BAs) require three or more semesters over the on-time benchmark to graduate. These figures further confirm the fact that many CUNY students require more than the standard time (in enrollment terms) to graduate. They also suggest that accurately tracing an entering cohort's history is a long-term project, especially for community college students.

However, this documentation of the conventional wisdom about CUNY students warrants further exploration. For example, what factors account for the observed variation in time-to-complete? Some would argue that it takes a longer time to graduate simply because the students enter with such poor academic records that it takes them more time to complete both the college level and required remedial course work. Others would argue that as a result of fundamental demographic changes the undergraduate population contains increasing proportions of part-time students, who of necessity require more semesters to finish.

These two arguments--and numerous variations upon them--really fall into two categories: academic and economic. While both recognize that CUNY students have changed dramatically in the

ten years since open admissions began, the academic argument suggests that, as a result of reduced entry standards, CUNY is now dominated by students who either cannot perform college-level work from the start, or do so only with great difficulty. By contrast, an economic argument would hold that expanded access has brought large numbers of poor and working class students into the University who must balance their academic pursuits with pressing financial concerns. The analysis that follows examines the relative merits of these two positions.

Patterns of Attendance

The aspect of attendance that we wish to understand is the number of semesters a student attended, prior to graduation. We refer to this measure as "total semesters" and examine the degree to which other variables, either independently or in combination, predict or explain it. Thus total semesters in attendance is the dependent, or criterion, variable. The predictor, or independent, variables are:

1) Transfer Academic Credits. Many of the graduates, especially the Baccalaureate degree recipients, had earned credits at postsecondary institutions other than the one from which they had graduated in June 1979. Some also received a small number of credits, usually 6 or less, for various other kinds of training, e.g., military service or at non-academic institutions.

These non-academic credits are not included in the analysis. Both the proportions of graduates who had transfer credits indicated on their transcripts and the source of these credits are reported in Table III.3. For both Associates and Bachelors graduates the major source of credits was another CUNY branch, though 17% of Bachelors had credits from other institutions, primarily within the New York City metropolitan area. The number of transfer academic credits a graduate has received is employed in the analysis of time to complete as a control variable; that is, the attendance patterns are analyzed after "holding constant," or controlling for, these credits.

2) Part-time Attendance. Approximately half of the graduates attended college part time at some point in their careers at CUNY (see Table III.4). Of interest here is that part-time attendance is more characteristic of Associate graduates, a finding not inconsistent with previously reported data on social and personal characteristics. A semester was coded as part-time when a student enrolled for less than 12 credits or credit equivalents. This measure is entered into our analysis both as a predictor (answering: how much of the variation in total number of semesters is attributable to attending part time?) and as control variable, since it is crucial to control for part-time enrollments in order to examine other influences operating independently.

3) Efficiency of Credit Accumulation. The average rate of credit accumulation or "credit efficiency" is another indicator of a students' attendance pattern. This measure is derived by determining the average credits per semester (counting summer as .5 and quarter sessions as .625 of a semester) earned at the college of graduation. A high credit efficiency rating signifies that the graduate had successfully completed a proportionally large course load in each semester of attendance. Those with lower credit efficiency indices might have registered for less credits each semester or received "withdrawal" or "failure" grades in a higher proportion of their courses. Consequently, credit efficiency may also be a surrogate measure of academic performance. The average credits earned each semester by Bachelor graduates was 13.7, while for Associates the mean was 12.8. Though this credit efficiency measure is correlated with semesters of part time enrollment, we expect it to exert an independent influence on the length of student careers.

4) High School Average,Remediation, and Grade Point Average. These three measures of academic performance and experience also may be expected to exert an influence on the length of student careers, albeit indirectly, through their influence on both the tendency to attend part time and credit accumulation. The distributions of high school average were presented above in Figure III.1.

In the analysis of the transcripts, we counted the total number of remedial course hours for which each graduate enrolled throughout their attendance at CUNY*. Fifty-eight percent of the graduates took some remedial course work (see Table III.5). The remedial course load for Associates was much higher than for Bachelors, with 17% of Associates requiring more than 12 semester-hours of remedial work. It is important to note how this measure of remedial course work was coded. The University classifies remedial courses as noncredit, developmental, and compensatory. In noncredit remedial courses, the total class contact hours were counted as remedial hours. In developmental and compensatory courses, where credit is awarded, the contact hours in excess of credit were counted as remedial hours. Thus, each remedial hour may be viewed as constituting a time delay equivalent to one degree credit. Consequently, a high remedial load can be expected to slow a student down.

Grade point average (GPA) is the cumulative index of course grades, as reported on (or calculated from) the transcript. A low GPA indicates a greater likelihood of having failed one or more courses, yet another delay on the path to graduation. (see Table III.6).

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*All references to the graduates' careers at CUNY refer only to their record at the institution from which they graduated, not to prior institutions, CUNY or non-CUNY.

Each of the factors discussed above (transfer credits, part-time attendance, credit accumulation, high school average, remediation, and grade point average) has a built-in effect on the total number of semesters from enrollment to graduation. However, the analysis that follows explores the relative magnitude of each factor and then investigates further the causal process underlying the interrelations between these variables (for similar analyses of entry cohorts, see Lavin, Alba and Silberstein, 1981).

Tables III.7 and III.8, present the results of total semester analyses where transfer credits are excluded and part-time attendance is held constant. This permits us to examine semesters to completion among students with similar attendance patterns and no prior credits. By comparing these data with the raw semester counts (Table III.2) we see that attending full time substantially increases the on-time completion rate from 44% to 51% among Bachelors and from 19% to 38% among Associates. As would be expected, there is a powerful relationship between type of attendance and completion time for both groups of graduates.

However, the form of tabular analysis illustrated in Tables III.7 and III.8 becomes unwieldy as more variables are introduced as controls. There is a statistical procedure which allows us to examine many variables simultaneously and measure their separate independent effects. This procedure is called multiple regression analysis.

We conducted such an analysis employing all the academic variables discussed above. In the interest of brevity we omit the technical details and turn instead to a summary of the results.*

- For both AAs and BAs attending part-time and credit earning efficiency are the most powerful predictors of the total number of semesters from enrollment to graduation. Part-time attendance, though, is most important.

- The effect of remedial hours on total semesters is small, though two times more important among AAs. This effect is independent of credit efficiency and suggests that AA students find it particularly difficult to compensate in later semesters for the time spent in remedial course work in earlier semesters. This finding on the effect of remediation among community college students closely parallels those of Lavin, Alba and Silberstein (1981:253).
- GPA and CAA have little effect on total semesters.

Since we found that the effects of part-time attendance and credit efficiency were so great and largely explained how many total semesters a graduate required, we next examined how well remedial hours, high school average and GPA predicted each of these characteristics:

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*Copies of the multiple regression tables, containing the more technical details of the analysis, are available to the reader on request.

- GPA and CAA, in that order, contribute only modestly to credit efficiency, while remedial hours slightly detract from it.

- The same academic variables are nearly totally unrelated to part-time attendance, the single most powerful predictor of career length.

Given the importance of part-time enrollment on total semesters, there is a need to better understand the factors influencing part-time study. Since the academic variables available from the transcript data had been exhausted, we identified several variables from the survey that could be expected to have an effect. The variables included the number of dependent children, marital status, employment while an undergraduate, family income, and parents education. The major findings from this analysis are as follows:

- The addition of these variables especially the fact of employment, dramatically increases our understanding of part-time attendance.

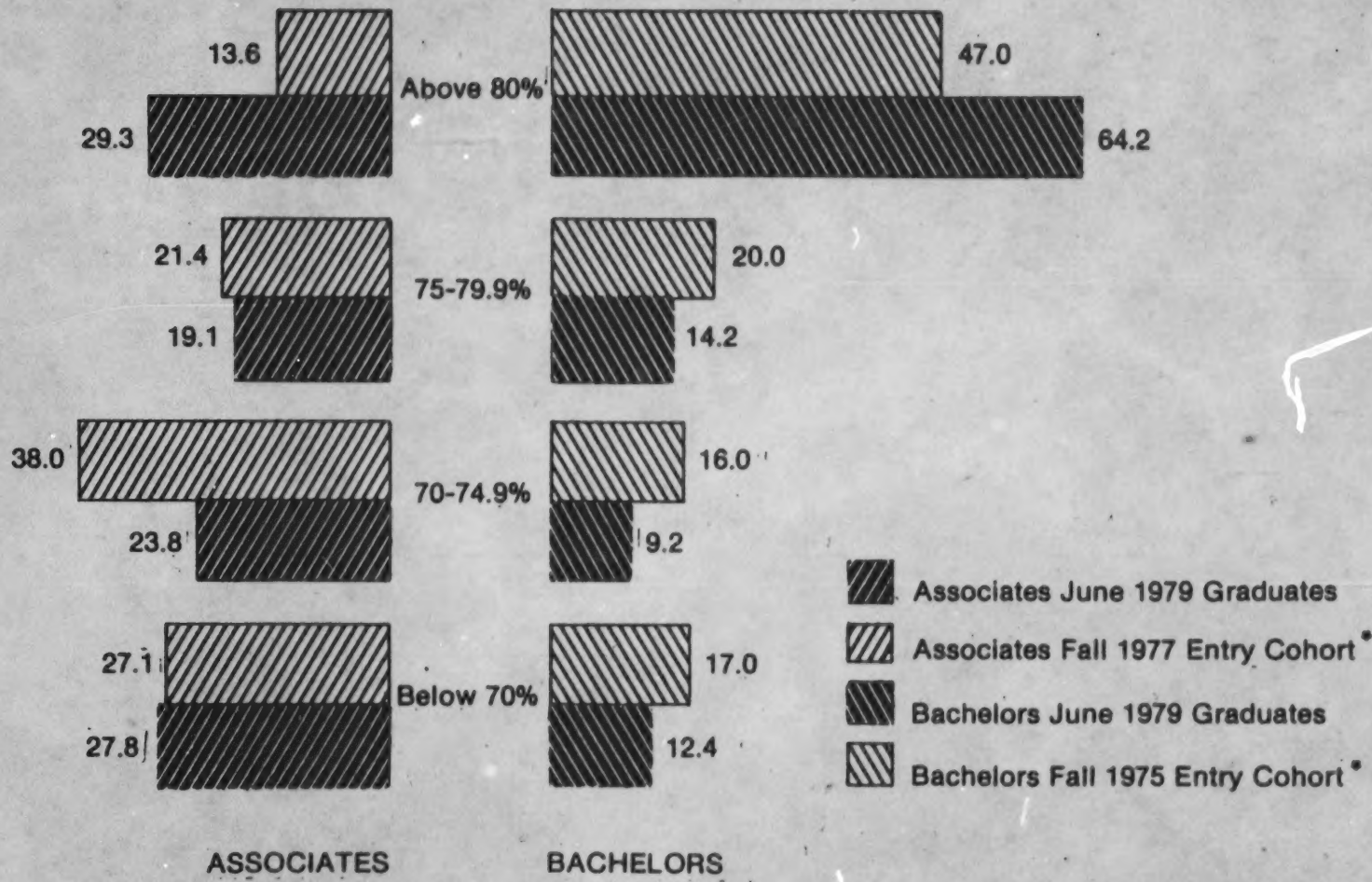
- Employment, particularly if it is full-time, results in a not surprisingly consistent pattern of part-time attendance and ultimately a longer undergraduate career. The need to work is an important component of student careers at CUNY (see, also, essentially identical findings in Lavin, Alba, and Silberstein, 1981:180-181).

Let us summarize our findings on the graduates' histories at CUNY. Many of the graduates began their undergraduate studies with poor academic preparation; this deficiency resulted in the addition to their program of significant amounts of non-credit remedial course work. Remediation slows students down on the path to graduation by reducing the ratio between course enrollments and actual credits. However, this pattern as documented in the regressions only tells us a small fraction about student careers. By contrast, the employment factor tells us a great deal: students who work tend to enroll consistently on a part-time basis and as a result, take a much longer time to complete their degrees. Thus, though academic factors surely play a role, the primary influence on graduation rates at CUNY is the economic character of the undergraduate population. Students who work (many of whom are also living on their own and already raising families) do not and cannot finish as quickly as those who can devote most of their time to education.

While this finding is not (or should not be) surprising, it is absolutely crucial to a better understanding of CUNY students. Students who are working must balance work and educational demands and evaluate the most productive course of action if forced to choose between the two. In the next section we will see that many of the graduates had actually begun their careers prior to beginning or while attending CUNY; for these graduates the balancing of education and economic objectives resulted in tangible payoffs in the job market.

Figure III.1

High School Averages of June 1979 Graduates and Entry Cohorts, Associates and Bachelors



*Modal year of entry for graduates

Table III.1: NUMBER OF BREAKS IN ATTENDANCE ("STOPPING-OUT") BY DEGREE

Breaks in Attendance	Associates	Bachelors	Total
None	82.2	83.9	83.3
1	14.5	12.7	13.3
2 or more	3.4	3.4	3.4
Total %	100.0	100.0	100.0
(N)	(554)	(913)	(1467)

Table III.2: NUMBER OF SEMESTERS* TO GRADUATION FROM TIME OF FIRST ENROLLMENT, BY DEGREE

Semesters	Associates	Bachelors
On time	18.6	44.2
Plus one	10.1	11.8
Plus two	25.7	24.2
Plus three or more	45.7	19.8
Total %	100.0	100.0
(N)	(449)	(516)

*Semester totals are exclusive of summer sessions; transfer students are excluded from these distributions.

Table III.3: SOURCE OF TRANSFER ACADEMIC CREDITS, BY DEGREE

Source	Associates	Bachelors	Total
No Transfer Credits	81.1	56.5	65.8
CUNY Senior College	7.1	8.1	7.7
CUNY Community College	4.2	18.8	13.3
SUNY	1.0	2.3	1.8
Other	6.6	14.3	11.3
Total %	100.0	100.0	100.0
(N)	(104)	(397)	(501)

Table III.4: TYPE OF ATTENDANCE BY DEGREE

Attendance*	Associates	Bachelors	Total
Full-time	41.5	55.5	50.2
Mostly Full-time	20.5	22.0	21.4
Mixed	17.0	9.0	12.0
Mostly Part-time	10.8	7.8	8.9
Part-time	10.2	5.8	7.4
Total %	100.0	100.0	100.0
(N)	(554)	(913)	(1467)

*Attendance categories are defined as follows:
Full-time = 100% full-time attendance
Mostly full-time = 66-99% full-time attendance
Mixed = 34-65% full-time attendance
Mostly part-time = 1-33% full-time attendance
Part-time = 0% full-time attendance

Table III.5: NUMBER OF REMEDIAL COURSE HOURS BY DEGREE

Remedial Hours	Associates	Bachelors	Total
None	32.1	48.7	42.5
1 - 6 hours	32.8	40.4	37.5
7 - 12 hours	17.7	6.7	10.9
13 or more hours	17.4	4.2	9.2
Total %	100.0	100.0	100.0
(N)	(554)	(913)	(1467)

Table III.6: DISTRIBUTION OF GRADE POINT AVERAGES (GPA) BY DEGREE

GPA	Associates	Bachelors	Total
Less than 2.50	33.0	19.9	24.8
2.50 - 2.99	31.3	30.3	30.7
3.00 - 3.49	26.1	31.6	29.5
3.50 - 4.00	9.6	18.2	15.0
Total %	100.0	100.0	100.0
(N)	(554)	(913)	(1467)

Table III.7: SEMESTERS* TO GRADUATION BY TYPE OF ATTENDANCE, BACHELOR GRADUATES**

	Attendance***				
Semesters	Full-time	Mostly Full-time	Mixed	Mostly Part-time	Part-time
On time	61.4	19.1	8.2	0.0	0.0
Plus one	11.1	18.3	4.8	1.5	0.0
Plus two	23.4	37.8	0.0	7.5	0.0
Plus three or more	4.1	24.6	87.1	91.1	100.0
Total %	100.0	100.0	100.0	100.0	100.0
(N)	(330)	(124)	(28)	(18)	(16)

*Semester totals are exclusive of summer sessions.

**Excludes graduates with transfer academic credits.

***Attendance categories are defined as follows:
Full-time = 100% full-time attendance
Mostly full-time = 66-99% full-time attendance
Mixed = 34-65% full-time attendance
Mostly part-time = -33% full-time attendance
Part-time = 0% full-time attendance

Table III.8: SEMESTERS* TO GRADUATION BY TYPE OF ATTENDANCE, ASSOCIATE GRADUATES**

	Attendance***				
Semester	Full-time	Mostly Full-time	Mixed	Mostly Part-time	Part-time
On-time	38.3	5.7	5.3	0.0	0.0
Plus one	15.8	12.4	1.8	2.9	0.7
Plus two	25.5	40.5	31.1	6.5	2.5
Plus three or more	20.5	41.7	62.1	90.6	96.8
Total %	100.0	100.0	100.0	100.0	100.0
(N)	(193)	(96)	(77)	(46)	(38)

*Semester totals are exclusive of summer sessions

**Excludes graduates with transfer academic credits

***Attendance categories are defined as follows:
Full-time = 100% full-time attendance
Mostly full-time = 66-99% full-time attendance
Mixed = 34-65% full-time attendance
Mostly part-time = 1%-33% full-time attendance
Part-time = 0% full-time attendance

IV. LABOR MARKET EXPERIENCES

This section presents a detailed description of employment experiences of the graduates. The resulting profile should fill a number of important needs, among them: University-wide data, heretofore unavailable, that will begin to inform program evaluation and planning activities; information for prospective students, as well as the public, about the destinations of CUNY graduates and the market value of a CUNY degree; and the establishment of a baseline of data against which to measure the experiences of future classes.

In addition to the profile, differences in the experiences between BA and AA graduates are also analyzed. This comparison is important primarily because so little is known about the labor market experiences of those with Associate degrees. Most research, indeed official government statistics, inappropriately lumps those holding the two year credential with those having "some college." Thus, the relative effect on job and salary of the AA degree - that is, relative to the BA, on one hand, and no degree at all, on the other - remains largely unknown.

A cautionary note is warranted for the data in this section. The graduates received the questionnaire in late May 1980, approximately one year after their graduation. Our questions

were phrased in such a way that the respondent should have assumed that they referred to the events since graduation. Thus the graduates in all probability referred to their current situation rather than that immediately following graduation, but some response error is still possible.

Occupational Status

At the time of the survey 70% of all graduates reported working in a full-time job; 11% were employed part-time; 11% were enrolled in full-time education; only 5% could be described as unemployed (see Tables IV.1 and IV.2). The 5% unemployment rate is consistent with national data on the labor market experiences of recent college graduates. Note that among those who report part-time employment, large proportions of both groups (78% of BAs and 82% of AAs) continued their education subsequent to graduation.

Differences in occupational status between BAs and AAs are minor, especially with regard to full-time work (Table IV.1). BAs show only a slight advantage over AAs (72% vs. 68%) in working full-time. BAs are also slightly more likely to be unemployed, while AAs are more likely to work part-time. The tendency to work part-time among AAs may be explained to some extent by additional family responsibilities (see Table IV.2).

Despite these modest variations, the striking findings in Tables IV.1 and IV.2 are the employment similarities of these two groups of graduates. While recent research literature (see, for example, Karabel, 1972; Pincus, 1980) characterizes community college education as "second class" in nature, and suggests a distinct labor market advantage for Baccalaureate recipients, these, and other findings discussed below, offer no evidence for such speculations, at least as they relate to the period shortly after graduation.

Joh Perceptions

Several similarities emerge in the job perceptions of the groups of graduates. For example, when asked to what extent their job was related to their major (or program) at CUNY, 56% of Associates

and 42% of Bachelors indicated that their position was directly related (see Table IV.3). This finding suggests that, at least within the short run, community college programs are perceived to be more closely linked to actual positions in the job market.

When asked about the advancement potential in their current job, 40% of the graduates felt their job had definite potential for advancement (see Table IV.4 and Appendix B, item 9) 31% thought advancement was possible, 15% thought it unlikely, and 15% regarded their position as temporary. Differences between BAs and AAs on this item were also modest with BA graduates being somewhat more likely (42% vs. 37%) to view their current job as having definite potential for advancement. Once again observed similarities are more striking than differences.

A suggested explanation for the initial labor market success of AA graduates should focus on the type of degrees they held: approximately 76% of them received degrees in vocational or career fields. By contrast, only 47% of BAs held degrees in professional programs (Business, Health, Engineering, and Public Service) which have clearly defined connections to actual jobs (See Tables IV.5 and IV.6). To be sure, there is some variation even within the BA liberal arts fields in terms of job connectedness - education or computer science, for example, versus fine arts or foreign language. But it is equally evident that the greater vocational preparation of AA graduates largely offsets any occupational effect of a four- versus a two-year degree in the period immediately following graduation.

Salary, Job Type, and Job History*

The average annual salary of graduates employed full-time was $14,252 (see Table IV.7 and Appendix B, item 10). During our editing of the raw responses, we noted that many graduates reported having secured their current job while they were undergraduates (see Appendix B, item 4). Indeed for those working full-time at the time they filled out the questionnaire, nearly 40% (207 of 489) reported having had continuous employment in that position both before and after graduation. Moreover, substantial salary differences attach to these contrasting job histories. We contend, therefore, that little can be understood about the salaries of recent graduates (from CUNY or similar urban institutions) without measuring job history.

The raw effects of job history are clearly illustrated in Table IV.7. There is no significant difference between degree levels. However, the average salaries (see the "Totals" line of Table IV.7) for both types of degree holders mask the effects of job history. The largest difference in the table emerges when we compare those who held their jobs prior to graduation and those who began their jobs after graduation. Among the former group, we find that both AAs and BAs report average annual incomes in excess of $16,500; those who secured their jobs after

*A more detailed analysis of salary attainment is provided in Murtha and Kaufman (1981). Copies are available on request.

graduation report an average annual income which is $4,000 less, regardless of degree. Furthermore, the effect of job history is largely consistent across actual occupational categories and major fields: in 78% of categories where there are sufficient comparison cases, those with prior job tenure and longer experience earn more. (See Tables IV.8, IV.9 and IV.10).

These tables (IV.8, IV.9, IV.10) also indicate the raw salary differences between various occupations and college majors. A quick glance at these averages illustrates that salaries differ widely across the categories of both variables. For example, managerial and engineering positions are the highest paid jobs for both groups of graduates. By contrast, education and social work positions are the lowest paid. Public employment positions (including many Civil Service jobs, such as firefighters and police officers) rank near the top. The health professions stand about in the middle of the distribution and largely reflect the starting or early salaries of nurses. The rank ordering of occupational categories and salaries is largely consistent for both groups of graduates.

The relationship between degree and salary confirm the view that some programs are more closely associated with higher paying jobs (and careers) than are others (see Tables III.9, III.10). Among the BAs those who major in the Humanities, Social Sciences and Public Services earn least while those in Engineering and Busi-

ness earn most. A similar pattern exists for AAs with Liberal Arts, Public Service and Secretarial Sciences at the low end, and Business and Engineering at the top.

The results of the foregoing analysis are clear: BAs enjoy no particular advantage over AAs in terms of short-run job experiences or income attainments. This finding, though important and provocative in its own right, must be viewed in conjunction with the findings on continuing education, to which we turn next.

Table IV.1: EMPLOYMENT STATUS ONE YEAR AFTER GRADUATION BY DEGREE

Employment Status	Associates	Bachelors	Total
Employed full-time	68.0	72.0	70.0
Employed part-time	16.0	8.0	11.0
Enrolled in full-time education	8.0	13.0	11.0
Unemployed	4.0	5.0	5.0
Other*	4.0	2.0	3.0
Total %	100.0	100.0	100.0
(N)	(303)	(507)	(805)

*Other includes those not seeking work because of illness or family responsibilities.

Table IV.2: REASON FOR NOT WORKING BY DEGREE

Reason	Associates	Bachelors	Total
Full-time education	51.2	65.7	60.9
Unable to find	15.7	13.7	14.4
Illness	2.0	1.1	1.4
Layoff	2.0	4.7	3.8
Family responsibilities	25.0	7.4	13.2
Other	4.1	7.3	6.3
Total %	100.0	100.0	100.0
(N)	(49)	(100)	(149)

Table IV.3: EXTENT TO WHICH EMPLOYMENT* IS RELATED TO UNDERGRADUATE PROGRAM, BY DEGREE

Relatedness	Associates	Bachelors	Total
Not related	23.2	30.0	27.6
Somewhat related	21.0	27.6	25.2
Directly related	55.7	42.4	47.2
Total %	100.0	100.0	100.0
(N)	(204)	(357)	(561)

*Includes full-time workers only

Table IV.4: PERCEPTIONS OF CAREER ADVANCEMENT* BY DEGREE

Potential for:	Associates	Bachelors	Total
Definite advancement	36.6	41.5	39.7
Possible advancement	34.1	29.4	31.1
Unlikely advancement	15.7	13.8	14.5
Temporary employment	13.7	15.4	14.8
Total %	100.0	100.0	100.0
(N)	(203)	(355)	(559)

*Full-time workers only.

Table IV.5: ASSOCIATE DEGREE PROGRAM AT TIME OF GRADUATION

Major Field	Percent
Liberal Arts	23.3
Business	31.6
Health Professions	20.9
Engineering	7.2
Secretarial Science	10.5
Public Services	5.4
Unknown	1.0
Total %	100.0
(N)	(554)

Table IV.6: BACHELOR DEGREE PROGRAM AT TIME OF GRADUATION

Major Field		Percent
A & S Humanities		14.2
A & S Natural Science		10.7
A & S Social Science		28.1
Total Liberal Arts	53%	
Business		17.0
Health Professions		9.2
Engineering		3.6
Public Services		14.7
Unknown		2.4
Total %		100.0
(N)		(913)

Table IV.7: AVERAGE SALARIES BY EMPLOYMENT HISTORY* AND DEGREE

Employed:	Associates		Bachelors		Total	
	Mean	(N)	Mean	(N)	Mean	(N)
Before graduation	$16,658	(81)	$16,578	(126)	$16,610	(207)
After graduation	$12,697	(92)	$12,437	(190)	$12,522	(282)
Totals	$14,543	(173)	$14,094	(316)	$14,252	(489)

*Full-time workers only.

Table IV.8: AVERAGE SALARIES* BY OCCUPATION, EMPLOYMENT HISTORY AND DEGREE

	ASSOCIATES						BACHELORS					
Occupation	$\bar{X}$	$\bar{X}P$	$\bar{X}S$	$\bar{X}P-\bar{X}S$	N	%	$\bar{X}$	$\bar{X}P$	$\bar{X}S$	$\bar{X}P-\bar{X}S$	$\bar{X}$	%
Clerical	$12,863	$14,582	$10,519	$4,063	48	28.9	$12,164	$13,265	$11,728	$1,537	49	15.9
Financial	13,753	21,648	9,877	11,771	15	9.0	13,961	15,773	12,999	2,774	66	21.4
Computer Science	15,606	20,206	13,029	7,177	10	6.0	15,967	16,761	14,980	1,781	20	6.5
Social Work	9,933	9,082	10,900	(1,818)	4	2.4	11,247	13,206	10,558	2,648	17	5.5
Education	8,629	8,170	9,500	(1,330)	2	1.2	9,777	9,707	9,790	(83)	39	12.6
Technician	12,852	14,855	11,118	3,737	14	8.4	13,799	17,282	12,700	4,582	9	2.9
Health	14,784	15,066	14,634	432	40	24.1	15,125	14,766	15,797	(1,031)	20	6.5
Public Service	18,470	18,938	17,531	1,407	12	7.2	18,168	18,801	14,491	4,310	19	6.2
Media & Publishing	--	--	--	--	--	--	13,008	16,376	11,195	5,181	12	3.8
Sales	11,477	8,000	11,947	(3,947)	7	4.2	14,193	16,532	12,462	4,070	21	6.8
Managerial	23,067	25,098	17,750	7,348	10	6.0	19,085	22,362	14,361	8,001	25	8.1
Engineering	16,164	19,180	14,000	5,180	4	2.4	19,369	19,402	19,317	85	12	3.9
Totals**	$14,467	$16,675	$12,571	$4,104	166	100.0	$14,053	$16,573	$12,348	$4,225	309	100.0

* Full-time workers only.
$\bar{X}$ = Average (Mean) salary for the occupational category
$\bar{X}P$ = Average (Mean) salary for those employed prior to graduation
$\bar{X}S$ = Average (Mean) salary for those employed subsequent to graduation
$\bar{X}P-\bar{X}S$ = Differences in average (Mean) salaries; figures in parentheses represent the amount by which $\bar{X}S$ exceeds $\bar{X}P$
N = Total number in each occupation category
% = The occupation category as a proportion of the total occupations
** Mean values differ from those reported in summary Table IV.7 because of missing data.

Table IV.9: AVERAGE SALARIES* BY ASSOCIATE DEGREE PROGRAMS AND EMPLOYMENT HISTORY

Degree Program	$\bar{X}$	$\bar{X}P$	$\bar{X}S$	$\bar{X}P-\bar{X}S$	N	%
Liberal Arts	$13,647	$15,205	$11,624	$3,581	27	15.9
Business	15,494	20,197	11,930	8,267	55	32.4
Health Professions	14,427	14,251	14,512	(261)	45	26.5
Engineering	17,514	18,842	14,400	4,442	12	7.1
Secretarial Science	11,650	12,231	11,162	1,069	26	15.3
Public Services	12,702	13,116	11,250	1,866	5	2.9
Total**	$14,383	$16,369	$12,707	$3,662	170	100.0

* Full-time workers only.
$\bar{X}$ = Average (Mean) salary for the occupational category
$\bar{X}P$ = Average (Mean) salary for those employed prior to graduation
$\bar{X}S$ = Average (Mean) salary for those employed subsequent to graduation
$\bar{X}P-\bar{X}S$ = Differences in average (Mean) salaries; figures in parentheses represent the amount by which $\bar{X}S$ exceeds $\bar{X}P$
N = Total number in each occupation category
% = The occupation category as a proportion of the total occupations
** Mean values differ from those reported in summary Table IV.7 because of missing data.

Table IV.10: AVERAGE SALARIES* BY BACHELOR DEGREE PROGRAMS AND EMPLOYMENT HISTORY

Degree Program	$\bar{X}$	$\bar{X}P$	$\bar{X}S$	$\bar{X}P-\bar{X}S$	N	%
A & S Humanities	$13,065	$19,491	$10,747	$8,744	36	11.6
A & S Natural Science	14,351	16,333	12,870	3,463	29	9.3
A & S Social Science	13,368	14,626	12,517	2,109	85	27.3
Business	15,024	18,368	12,816	5,552	74	23.8
Health Professions	14,106	14,640	13,594	1,046	26	8.4
Engineering	18,405	18,320	18,476	(156)	14	4.5
Public Services	13,093	16,463	10,833	5,630	47	15.1
Total**	$14,070	$16,535	$12,443	$4,092	311	100.0

* Full-time workers only
$\bar{X}$ = Average (Mean) salary for the occupational category
$\bar{X}P$ = Average (Mean) salary for those employed prior to graduation
$\bar{X}S$ = Average (Mean) salary for those employed subsequent to graduation
$\bar{X}P-\bar{X}S$ = Differences in average (Mean) salaries; figures in parentheses represent the amount by which $\bar{X}S$ exceeds $\bar{X}P$
N = Total number in each occupation category
% = The occupation category as a proportion of the total occupations.
** Mean values differ from those reported in summary Table IV.7 because of missing data.

V. SUBSEQUENT EDUCATION

As with occupation and income, initial similarities between BAs and AAs in educational enrollment rates are more striking than the differences. In fact, at the time of the survey somewhat more AAs (54%) reported continuing their education than BAs (46%, see Table V.1 and Appendix B, Item 13). This is not altogether unexpected since the articulation policy in effect between CUNY senior and community colleges guarantees graduates of the community colleges admission to one of the senior colleges. However, these simple enrollment rate similarities belie significant differences between the two groups.

First, as indicated in Table V.1, BAs enroll predominantly (33%) in graduate programs, while AAs enroll (46%) in Bachelor's programs. (Note that approximately 10% of each group enrolled in non-degree training programs of various kinds.) This obvious difference in <u>type</u> or <u>level</u> of enrollment, not reflected in the overall enrollment rates, is important to keep in mind when considering potential long-term differences between BA and AA degree recipients. Recall that our findings on jobs and incomes were remarkable for their similarity, suggesting that the labor market payoff for a four-year degree (over a two-year one) is negligible, at least in the short run. By contrast, the educational careers of BA and AA graduates are by nature dissimilar, with the BAs more likely to reach post graduate and professional

training. We would expect that as the time from graduation increases, greater differences in job, salary and career would emerge between the BAs and AAs of our study. Thus, BAs possess a longer term advantage over AAs that is not apparent from our snapshot of starting salaries.

This linkage between educational career and ultimate occupational destination is illuminated by examining the differences in educational aspirations between BAs and AAs (Table V.2), along with the types of postgraduate programs in which BAs enroll (Table V.3). The overwhelming majority of both groups--approximately 85%--aspire to a degree higher than the one they have already completed (see Table V.2). However, 36.5% of AAs aspire to a BA, resulting in a majority (52%) with aspirations at or below the level already achieved by all the BAs. As a result, higher proportions of BAs aspire to Masters (56% vs 33%), Professional (13% vs 9%) and Doctoral degrees (15% vs 6%). If we assume that these differences in aspirations will correlate with ultimate educational outcomes, it is only logical to expect higher proportions of doctors, lawyers, and other professionals among the BA group at sometime in the future.

The actual program enrollments of BAs underscore this point (Table V.3). Substantial numbers of BAs were enrolled for postgraduate training in teaching (27%), business (12%), medicine (10%), and law (6%), as well as numerous other professional

fields. Thus, many of these BA graduates are working toward careers in high-paying fields such as medicine, law, business and engineering; these four fields constitute a total of 32% of all BA postgraduate enrollments. Note, however, that heaviest BA enrollments are in education (27%), reflecting the large proportion of graduates interested in teaching careers, where salaries, as well as job prospects, are not very good.

Attitudes Toward CUNY

A similar pattern of differences emerges between BAs and AAs on several survey items that focused on satisfaction with CUNY.

When asked if they would enroll in college again, 98% of all graduates replied affirmatively with only small differences between BAs and AAs (see Table V.4). Also, approximately equal proportions of BAs (68%) and AAs (62%) would enroll in the same undergraduate program in which they had earned their degree. However, presumed satisfaction with the college of graduation has a different pattern: 21% of BA graduates who would enroll again would do so outside CUNY, more than twice the proportion of AA graduates (10%). At the same time, one-third of AAs would go to a different CUNY branch, compared to 13% of BAs. These differences in orientation between BAs and AAs may reflect quite varied sources of dissatisfaction: community college graduates with their level of education (an AA degree vs. a BA degree) and

senior college graduates with CUNY itself. There is an unforeseen irony in the senior college findings: BA graduates seem dissatisfied with CUNY because they have achieved a measure of success and have now, presumably, changed their reference groups and widened their horizons. Put simply, many AAs now aspire to a BA degree--primarily from CUNY-- and many BAs seem to desire an advanced degree, often one from another institution. Notwithstanding the possible subtleties contained within the graduates' responses, it is heartening to realize that 80% of recent BAs and 90% of recent AAs, would, if given the chance to decide again, enroll at CUNY. This finding indicates not only a very high degree of satisfaction with the education received at CUNY, but also, albeit indirectly, a general optimism about present job and income status. Moreover, satisfaction with CUNY is also reflected in a more objective way: of those who continue their education in degree programs, approximately 77% of AAs and 44% of BAs do so at CUNY (see Table V.1).

Table V.1: EDUCATIONAL EXPERIENCES SINCE GRADUATION BY DEGREE

Enrollment Status	Associates	Bachelors
CUNY Bachelors Program	35.1	1.0
Other Bachelors	10.6	.8
CUNY Graduate Program	-	14.5
Other Graduate Program	-	18.4
Other Training	8.8	11.4
Did Not Enroll	45.5	53.9
Total %	100.0	100.0
(N)	(298)	(492)

Table V.2: DISTRIBUTION OF HIGHEST DEGREE ASPIRATIONS AMONG THE GRADUATES

Degree Aspiration	Associates	Bachelors
Associate	15.2	-
Bachelor	36.5	16.9
Masters	33.0	55.9
Professional	9.3	12.7
Ph.D.	5.9	14.6
Total %	100.0	100.0
(N)	(298)	(490)

Table V.3: DISTRIBUTION OF POST-GRADUATE DISCIPLINES FOR BACCALAUREATE GRADUATES ENROLLED IN DEGREE PROGRAMS

Discipline	Percent
Education	27.7
Business	12.4
Medicine	9.9
Public Service	9.1
Law	6.4
Psychology	6.2
Social Science	5.9
Computer Science	5.7
Life Sciences	2.8
Engineering and Architecture	2.9
Humanities	2.9
Natural Science	3.3
Other Health	2.3
Communications	1.9
Religion	.7
Total %	100.0
(N)	(162)

Table V.4: SATISFACTION WITH UNDERGRADUATE COLLEGE AND PROGRAM CHOICE, BY DEGREE

Item	Associates	Bachelors
Would you enroll in college again?		
Yes	98.9	96.6
No	1.1	3.4
Total %	100.0	100.0
(N)	(301)	(500)
Would you enroll in the same major/program?		
Same	62.3	68.3
Different	37.7	31.7
Total %	100.0	100.0
(N)	(295)	(476)
Would you enroll in the same college?		
Yes	56.1	65.3
No,different CUNY college	34.1	13.1
No,a college outside CUNY	9.8	21.7
Total %	100.0	100.0
(N)	(296)	(470)

VI. CONCLUSIONS

In a society where access to entry-level positions and career advancement has become increasingly dependent on educational achievement, The City University provides many students of modest means a chance to meet these requirements. More often than not recent graduates of The City University are from families of limited income and educational achievements. As a result, the majority of graduates are upwardly mobile--educationally and, most probably, occupationally--relative to their parents.

However, improving one's life chances through attendance and subsequent graduation from CUNY often requires considerable personal effort and sacrifice. The path to graduation is a long one for many of the students, involving educational deficiencies upon entry and economic and family pressures throughout their undergraduate years. For these students, who must overcome academic underpreparedness and/or balance family and employment responsibilities with their educational pursuits, attainment of the degree represents a remarkable achievement.

Our analysis of students' histories at CUNY revealed that academic factors, especially the need for remediation, slowed students' progress toward their degree. This finding is consistent with the conventional wisdom explaining why many students in the University do not complete their studies in

the so-called on-time periods. Notwithstanding this, our data demonstrate that the key reasons behind lengthy CUNY student careers are economic in nature. Economic considerations, particularly the need to work, explain more than all academic factors combined.

Thus, the combining of work and study is an important aspect of students' careers in the University. For example, over 20% of the graduates worked full-time while studying for their degrees. Such students no doubt constitute a higher proportion of the total undergraduate population than our data indicate. In light of these findings, we believe that the delivery of program and support services to this population should be examined and, if necessary, restructured.

Another implication for University policy derives from the lack of difference in short term salary attainments of Associate and Bachelor's graduates. Though, ultimately, degree distinctions among the graduates will influence careers and future incomes, we find little evidence to support the view that community college education is a dead end for those who attain the Associate's degree. In fact, the immediate pay-off for this degree, particularly in career-oriented programs, may serve as an inducement to enroll in a two year program even

when a four year program is available. This may be especially the case among those facing academic and economic problems upon entry to the University.

In this way, if our logic is correct, the labor market acts as a constraint upon CUNY's capacity to provide full educational opportunity. It may very well be that otherwise qualified students pass up the opportunity for four year degrees, lulled into a false sense of security by the availability in the here and now of relatively well-paying jobs. This is not to suggest that these students be counseled away from community college programs but, rather, that they be made aware of the full range of educational opportunities available and the benefits to be derived from them.

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APPENDIX A. DESIGN AND METHODOLOGY

In designing the study, it was decided to take a series of systematic random samples from each college. A ten percent sample from each college was selected, except in those cases where a one-in-ten sample would yield a total college sample of under 50. In the cases where the college graduating class was less than five hundred, the sampling fraction was increased so as to draw at least 50 cases. This procedure ensured sufficient cases for some college to college comparisons. The overall proportion of the June 1979 graduating class selected for the sample was 13.6%. (For a summary of sample proportions and response rates by college, see Table A. 1).

After selecting the sample the study proceeded in two parts. The first phase consisted of an analysis of the academic records of each graduate in the sample. To accomplish this task, transcripts for the 1,467 graduates in the sample were collected from the colleges. The information from each student's transcript was coded to create a master file containing historical information on each graduate in the sample. It was possible to establish from these records how long an average graduate took to complete his or her degree, the extent of stopping out, the average amount of remediation, as well as the relationships between these and other factors.

Phase Two consisted of a questionnaire survey of the sample (the same 1,467 individuals) which was designed to gather additional information not available from University records. The survey was designed to collect basic demographic data (e.g., ethnicity, marital status, age) and information on post-graduation status: type of job, income, enrollment in further education. The survey resulted in a 59% effective response rate (based on 1,373 delivered questionnaires) and an analysis of respondents and non-respondents revealed only minor response biases.

To examine the magnitude of sampling and response effects, the degree of variation in the sex distributions of the sample, the survey responses, and the entire population was examined (Table A.2). We compared the population parameter for sex to both raw and adjusted figures for the sample and the survey. The population proportions (column 1) are derived from the official graduation reports provided by each college. The raw figures (columns 2 and 4) are the actual sex proportions for the entire sample (2) and the survey respondents (4). The adjusted proportions for the entire sample (column 3) and for the survey (column 5) are the result of arithmetic corrections made to take into account differential sampling fractions, variations in the college

response rates, and somewhat different response rates between men and women. As is apparent from the table, both the sampling procedures and the response pattern introduced some error. The adjustments compensated for these differences quite precisely. Since the adjustment procedure works so well for the sex characteristic, we infer that both the survey and the sample data largely reflect the population characteristics in other areas as well.

TABLE A.1: Sampling Proportions and Survey Response Rates by College

	Sampling Proportions		Survey Response Rates	
Senior Colleges	Pct.	N	Pct.	N
Baruch	10	(70)	58.6	(41)
Brooklyn	10	(132)	62.9	(83)
City	10	(95)	57.9	(55)
Hunter	10	(77)	59.7	(46)
John Jay	20	(93)	45.2	(42)
Lehman	10	(65)	56.9	(37)
Queens	10	(141)	61.7	(87)
Staten Island (Upper)	25	(60)	51.7	(31)
York	33	(71)	54.9	(39)
Community Colleges				
Bronx	20	(72)	41.7	(30)
Medgar Evers	50	(67)	53.7	(36)
Hostos	50	(51)	56.9	(29)
Kingsborough	10	(82)	51.2	(42)
LaGuardia	20	(69)	59.4	(41)
Borough of Manhattan	20	(83)	39.8	(33)
New York City	10	(77)	48.1	(37)
Queensborough	10	(66)	57.6	(38)
Staten Island (Lower)	20	(96)	60.4	(58)
TOTALS	14%	(1,467)	59%*	(805)

*Total response rate is based on the total of respondents actually receiving questionnaires (N=1,373).

TABLE A.2: Sampling Variation: Comparisons of Raw and Adjusted Sample and Survey Sex Distributions to Actual Population Distribution.

	Population	Sample		Survey	
	(1)	(2)	(3)	(4)	(5)
	Actual	Raw	Adjusted	Raw	Adjusted
Men	42.1	44.6	41.4	36.4	41.5
Women	57.9	55.4	58.6	63.6	58.5
TOTALS %	100.0	100.0	100.0	100.0	100.0
(N)	(10,872)	(1,467)	(1,467)	(805)	(805)

APPENDIX B. SURVEY QUESTIONNAIRE

The City University of New York

Office of Institutional Research and Analysis
535 East 80 Street, New York, N.Y. 10021
212/794-5464

May 15, 1980

Dear Graduate,

The Office of Institutional Research and Analysis of The City University of New York (CUNY) is conducting a follow-up survey of June 1979 graduates from the University. Beginning on the reverse side of this letter is a questionnaire which we ask you to complete as soon as you can and return to us in the enclosed, postage-paid envelope. Filling out the questionnaire should take only about fifteen minutes of your time. Your cooperation is extremely important because the information from this study will help us to assess and plan for the educational and occupational needs of our students.

You will notice that a numbered label is affixed to the front of the questionnaire. These numbers are for verification purposes and will not be part of any report. All findings will be reported as statistical summaries that will not identify you in any way. Be assured that your responses to all items will be held in the strictest confidence.

Although you are not required to participate in the study, we would appreciate your completing the questionnaire and returning it to us promptly. You may feel that you do not want to answer certain questions, for whatever reason. However, if you do skip an item, please continue with the others. We need as complete a questionnaire from you as you can provide. If you are interested in receiving a summary of the results of the study, please check the appropriate box at the end of the questionnaire. Thank you in advance for your cooperation.

Sincerely,

Barry Kaufman
University Associate Dean

If this questionnaire was sent to the wrong address, would you please indicate your correct address below.

_____
(Street Address)

_____
(City, State, Zip Code)

The City University of New York
Survey of June 1979 Graduates

Questions one through twelve focus on your experiences in the labor market since your graduation last June. (For all questions please check one answer only, except where noted.)

1. [10] At the present time are you

1 ☐ Working full-time } PLEASE CONTINUE
2 ☐ Working part-time } WITH QUESTION 2.
3 ☐ Not working now > PLEASE GO TO QUEST. 11.

2. [11] Please check whether the job you *have now* is the first, second, third, or more job(s) you have held since graduation.

1 ☐ 1st job since graduating
2 ☐ 2nd job since graduating
3 ☐ 3rd or more job since graduating

3. [12] Since your graduation from CUNY how long did it take you to find the job you *have now*?

1 ☐ I had the job before graduation
2 ☐ 2 months or less
3 ☐ 3-6 months
4 ☐ 7 or more months

4. [13] How did you find out about this job? (check one)

1 ☐ Already had it while at CUNY
2 ☐ College Placement Office
3 ☐ Employment Agency
4 ☐ Newspaper Advertisement
5 ☐ Direct Application to Employer
6 ☐ Faculty member told me about it
7 ☐ Friend told me about it
8 ☐ Relative told me about it
9 ☐ Other (Please specify) _____

5. [14] Regardless of how you found out about the job you *now have*, which of the following people (if any) actually helped you get the job? (Check the *one* most helpful.)

1 ☐ A friend
2 ☐ A relative
3 ☐ A faculty member
4 ☐ A college placement officer
5 ☐ A business colleague
6 ☐ Another person (specify who)

7 ☐ No one person really helped me out

6. What kind of work are you doing now. Essentially whom do you work for and what do you do?

[15-17] Employer _____
(Name of employer or organization.)

[18-20] Specific job title

(Salesperson, teacher, engineer, auto mechanic, data processor, etc.)

7. [21] To what extent is this job related to the major program you were enrolled in at CUNY?

1 ☐ Not related } PLEASE CONTINUE WITH QUESTION 8.
2 ☐ Somewhat related } PLEASE GO TO QUESTION 9.
3 ☐ Directly related }

8. [22] If this job is not related to your major or program what is the principal reason for this?

1 ☐ Not applicable to me (My job was "somewhat" or "directly" related to my major/program)
2 ☐ I did not look for a job related to my major/program
3 ☐ I looked for, but could not find, a job related to my major/program
4 ☐ My major/program was not in a career or professional field
5 ☐ I changed my career interest

9. [23] Which statement best describes how you regard your job?

1 ☐ Employment with definite potential for advancement
2 ☐ Employment with possible potential for advancement
3 ☐ Employment with little potential advancement
4 ☐ Temporary employment, until I can find something else.

10. [24-28] What is your present yearly salary *before* taxes?

$ _____ (yearly salary)

NOW PLEASE GO TO QUESTION 12.

11. [29] What is the *main* reason you are not working now?

1 ☐ Continuing my education full-time
2 ☐ Seeking employment but have been unable to find the job I want
3 ☐ Illness or disability
4 ☐ Temporary Layoff
5 ☐ Family Responsibilities
6 ☐ Other (please specify) _____

NOW PLEASE CONTINUE WITH QUESTION 12.

12. Regardless of the courses you took in college, which of the following additional skills did you have at the time you graduated? (Check as many as apply.)

1 ☐ [30] Foreign Language
1 ☐ [31] Computer Programming
1 ☐ [32] Keypunching
1 ☐ [33] Accounting/Bookkeeping
1 ☐ [34] Typing
1 ☐ [35] Stenography
1 ☐ [36] Drafting
1 ☐ [37] Other (please specify) _____

Questions thirteen through eighteen refer to your educational experiences since your graduation last June.

13. [38] Since your graduation have you enrolled in another educational program?

1 ☐ No > PLEASE GO TO QUESTION 18.
2 ☐ Yes, bachelor's program at CUNY
3 ☐ Yes, bachelor's program at college other than CUNY
4 ☐ Yes, graduate or professional program at CUNY
5 ☐ Yes, graduate or professional program at college other than CUNY
6 ☐ Yes, other educational program } CONTINUE WITH QUESTION 14.

(please describe) _____

14. [39] Are you currently enrolled in this program

1 ☐ Full-time
2 ☐ Part-time
3 ☐ Not currently enrolled

15. What type of program have you enrolled in since your graduation last June? Please be as specific as you can. (For example, is your present program in law, business, medicine, history, social work, etc.?)

[40-43] (Specific program) _____

_____

_____

16. [44] Overall, how much difficulty did you have in making the transition from the program you graduated from last June to your current program? Was it:

1 ☐ Very difficult for you
2 ☐ Somewhat difficult for you
3 ☐ Not so difficult for you
4 ☐ Easy for you

17. [45] How well did your program at CUNY (the one you graduated from last June) prepare you for your new program? Were you:

1 ☐ Very well prepared
2 ☐ Adequately prepared
3 ☐ Poorly prepared
4 ☐ Not prepared at all

18. [46] Regardless of whether or not you are currently enrolled in an educational program at this time, what is the highest degree you eventually intend to complete (if you do not plan to continue your education, check the degree you now hold.)

1 ☐ Associate's
2 ☐ Bachelor's
3 ☐ Master's
4 ☐ Professional (medicine, dentistry, law, theology.)
5 ☐ Ph.D.

Questions nineteen to thirty refer to your experiences at CUNY before your graduation last June.

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19. [47] During the time you were studying at CUNY, what is your best estimate of your immediate family's total yearly income *before* taxes.

1 ☐ Less than $4,000
2 ☐ $4,000 - $7,999
3 ☐ $8,000 - $11,999
4 ☐ $12,000 - $15,999
5 ☐ $16,000 - $19,999
6 ☐ $20,000 - $23,999
7 ☐ $24,000 or above

20. [48] In the answer you checked above (in Question 19) which family were you referring to?

1 ☐ The family in which one of my parents (or a guardian) was head of household.
2 ☐ The family in which I or my spouse was head of household.

21. [49] Did you have any dependent children when you were studying at CUNY?

1 ☐ No
2 ☐ Yes

22. [50] In order to support yourself before your graduation did you receive any form of financial aid (i.e., TAP, BEOG, Work Study, or Loans.)

1 ☐ Yes, received some form of financial aid
2 ☐ No, did not receive any financial aid

23. [51] During the time you were at CUNY, were you employed?

1 ☐ No
2 ☐ Yes, part-time
3 ☐ Yes, full-time

24. [52] What language was spoken in your home when you were studying at CUNY?

1 ☐ Only English
2 ☐ Both English and another language (please specify)

_____

3 ☐ Primarily another language (please specify)

_____

25. [53] Which of the following comes closest to your most important reason for going to college?

1 ☐ To obtain specialized occupational training
2 ☐ To develop my intellectual abilities
3 ☐ To prepare for a profession
4 ☐ Personal growth and social development
5 ☐ To qualify for a higher-level position
6 ☐ Did not know what else to do
7 ☐ Other (please specify)

_____

26. [54] If you could do it over again, would you enroll in college?

1 ☐ Yes > PLEASE CONTINUE WITH QUESTION 27.
2 ☐ No > PLEASE GO TO QUESTION 29.

27. [50] Would you enter the same major or program in which you received your degree last June?

1 ☐ Yes, same program
2 ☐ No, different major/program (please specify)

_____

_____

28. [56] Would you enroll at CUNY?

1 ☐ Yes, at the same college
2 ☐ Yes, but at a different CUNY college
3 ☐ No, not at CUNY

PLEASE GO TO QUESTION 30.

29. [57] Based on what you know now, why would you choose *not* to enroll in college?

1 ☐ I did not really learn anything important
2 ☐ I could have done just as well in the job market without a degree
3 ☐ I just did not fit in at college
4 ☐ Other (please specify)

_____

_____

30. [58] While you were at CUNY did you have any handicapped condition that required special services from the college?

1 ☐ Yes
2 ☐ No

Before concluding we would like you to provide us with the following background information:

31. How much formal education did your parents (or guardians) obtain?

Father [59]	Mother [60]	
1 ☐	1 ☐	8th grade or less
2 ☐	2 ☐	Some high school
3 ☐	3 ☐	High school graduate
4 ☐	4 ☐	Some college
5 ☐	5 ☐	College graduate
6 ☐	6 ☐	Post grad. or Professional degree (M.A., Ph.D., M.D., etc.)
7 ☐	7 ☐	Do not know

32. [61] Which of the following ethnic categories best describes you?

1 ☐ Puerto Rican
2 ☐ Other Hispanic
3 ☐ Black (non-Hispanic)
4 ☐ White (non-Hispanic)
5 ☐ American Indian
6 ☐ Asian or Pacific Islander

33. [62] Sex

1 ☐ Male
2 ☐ Female

34. [63-64] How old are you?

___(YEARS)

35. [65] Marital Status

1 ☐ Single
2 ☐ Separated, Divorced
3 ☐ Widowed
} PLEASE GO TO QUESTION 37.

4 ☐ Married > PLEASE ANSWER QUESTION 36.

36. [66] If you are married, were you married:

1 ☐ Before your graduation last June
2 ☐ After your graduation last June

37. [67] How many dependent children do you have living with you at this time?

0 ☐ None
1 ☐ One
2 ☐ Two
3 ☐ Three
4 ☐ Four
5 ☐ Five or more

38. [68] If you were asked to compare yourself to your parents when they were your age, would you say that your chances for occupational success are:

1 ☐ Very much better than my parents
2 ☐ Somewhat better than my parents
3 ☐ The same as my parents
4 ☐ Somewhat worse than my parents
5 ☐ Very much worse than my parents

[69] Please check the box below if you would like a summary of the study results.

1 ☐ I would like a summary of results.

Thank you for your cooperation. Now please place the completed questionnaire in the return envelope and mail it (no postage required) as soon as possible. If you have any questions about the questionnaire, please call Mr. James Murtha at (212) 794-5710.